REMARKS

In this Response, claims 27, 35, and 37 have been amended, claim 32 has been cancelled, and claim 47 has been added. Support for these amendments and the new claim is found throughout the specification. No new matter has been added.

Claims 27-31 and 33-47 are pending.

Claim Rejections - 103

In the Office Action claims 27, 31, 33-40, and 42-46 were rejected under 35 U.S.C. 103(a) as being unpatentable over Perahia et al (US 7,352,718) (hereinafter "Perahia") in view of Shatil (Us Pub. 2004/0086027) (hereinafter "Shatil") and Priotti (US Pub. 2004/0120410) (hereinafter "Priotti"). The applicants herein traverse the rejection of these claims.

Claim 27, as amended, recites a method comprising:

> computing, by a wireless access point, a channel response for each of a plurality of channels based on training signals received over two or more antennas from multiple stations;
> receiving from multiple stations, at the wireless access point, a plurality of uplinked spatial division multiple access (SDMA) data streams that are out of synchronism by a time period greater than an allowed guard band time period;
> converting the plurality of SDMA data streams from a first time domain to a frequency domain;
> separating, with a spatial demapper, the plurality of SDMA data streams into a separated plurality of data streams in the frequency domain based on the channel response for each of the plurality of channels;
> converting the separated plurality of data streams from the frequency domain to a second time domain; and
> synchronizing the separated plurality of data streams in the second time domain.

In the *Response to Arguments* section of the FOA it was stated that Perahia teaches that an access point can receive uplink SDMA data streams that are out of synchronism by a time period greater than an allowed guard band time period. In particular, the FOA pointed to several teachings of Perahia that relate to synchronizing streams and stated, in essence, that there would be no synchronizing necessary unless the streams were out of synchronism in the first place. Even if Perahia clearly taught

receiving data streams out of synchronism as alleged, the Applicants traverse the statement that Perahia teaches receiving data streams out of synchronism "by a time period greater than an allowed guard band time period" as is clearly recited in claim 27.

As the Applicants' specification describes in, e.g., paragraphs [0027] - [0028], when data streams are out of synch to the degree recited in claim 27, traditional SISO techniques of removing intersymbol interference (ISI) breakdown. The Applicants' specification goes on to state preliminary procedures (also recited in claim 27) that may be used when the multiple data streams received over multiple antennas are out of synch to the degree recited so that the SISO techniques may be employed to properly synchronize the data streams.

Perahia does not provide any teaching or suggestion as to how these data streams, when received out of synchronism "by a time period greater than an allowed guard band time period" may be processed prior to employing conventional synchronizing techniques. Rather, Perahia describes message-intensive techniques that are employed in order to maintain a desired synchronicity between the various communication nodes. See, e.g., *Perahia*, column 9, lines 31 – 45 in which it is described how the access point will transmit beacons to the subscriber stations with timing adjustment controls. Accordingly, not only would Perahia not be found to teach or suggest that the data streams are out of synch to a degree as recited in claim 27, without guidance as to how to process such data streams, it is highly unlikely that Perahia's system is even capable of processing them.

In alleging that Perahia taught receiving the data streams to the recited degree, the *Response to Arguments* section went on to state that column 7, lines 14-25 of Perahia makes it clear that Perahia's system "is capable of receiving upstream SCDMA streams that can be out of synch with one another greater than by a short symbol (0.8 microseconds) and can be eventually synchronized to within a few hundred nanoseconds." To the contrary, this recited portion of Perahia, as made clear by reading the surrounding text, teaches that the stations' upstream transmissions are coordinated so that the start of frames will be received within a few hundred nanoseconds (i.e., 0.3 microseconds) of one another. Else, "[a]s arrival offset

increases, multipath delay spread immunity declines, eventually leading to failure of packet reception." *Perahia*, column 7, lines 21-23. This mandate of requiring the stations to be properly controlled so that their transmissions are synched to within 0.3 microseconds of one another is a direct teaching away from the above-recited portion of claim 27. This is also further evidence that Perahia's system is not even capable of processing the data streams as recited by claim 27.

The Applicants' have taken this opportunity to present other recitations in claim 27 that relate to the preliminary procedures that may be conducted to allow successfully synchronizing of streams that are out of synch to the degree recited in claim 27. These recitations include "computing … a channel response for each of a plurality of channels based on training signals received over two or more antennas from multiple stations," and "separating, with a spatial demapper, the plurality of SDMA data streams into a separated plurality of data streams in the frequency domain based on the channel response for each of the plurality of channels." The cited references, alone or in any combination, fail to teach or make obvious these recitations when claim 27 is considered, as a whole, as is required.

For at least these reasons, claim 27 is patentable over the cited references.

Claims 31, 33-40, and 42-46 depend from, or include recitations similar to at least some of the above-discussed recitations of claim 27. Accordingly, these claims are patentable over the cited references for at least similar reasons.

Claims 32 and 41 were rejected under 35 U.S.C. 103(a) as being unpatentable over Perahia in view of Shattil and Priotti, as applied to claims 27 and 40, in further view of Shatil (Us Pub. 2002/0150070) (hereinafter "Shatil 070").

Claim 32 has been cancelled rendering its rejection moot. Claim 41 depends from claim 40. As discussed above, Perahia, Shattil, and Priotti fail to teach or make obvious processing (in this case "separating") SDMA data streams received out of synchronism by a time period greater than an allowed guard band time period." Shatil 070 fails to correct for this underlying deficiency of the asserted combination. Accordingly, claim 41 is patentable over the cited references for at least similar reasons.

New claim

The Applicants have taken this opportunity to add claim 47, which depends on claim 27. This claim includes a recitation that "at least two of the plurality of uplinked SDMA data streams are out of synchronism greater than 0.8 microseconds." It is clear that none of the cited references teach or suggest such a recitation. Accordingly, this claim is additionally patentable over the cited references for at least this reason.

Conclusion

In light of the above remarks, the Applicants respectfully submit that claims 27-31 and 33-47 are in condition for allowance. Early issuance of Notice of Allowance is respectfully requested. In the event that a Notice of Allowance cannot be promptly issued, the Applicant requests that the Examiner contact the Applicant's undersigned representative at 503-796-2972 to discuss any unresolved issues.

The Commissioner is hereby authorized to charge shortages or credit overpayments to Deposit Account No. 500393.

Respectfully submitted,

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